

**Patent claims**

1. A method for the computer-aided monitoring of process  
parameters of a manufacturing process of a physical  
5 object, object data which identify the physical object  
being assigned to various hierarchical levels, object  
data of various hierarchical levels being grouped to  
form hierarchical object data records, limit values  
for at least one process parameter being stored and  
10 respectively assigned to a hierarchical object data  
record, process data of the at least one process  
parameter, measured during the manufacture of physical  
objects, being stored and the hierarchical object data  
records corresponding to the object data being  
15 determined for physical objects manufactured;  
in which method an unspecific value is stored for the  
hierarchical level if no specific value is stored in  
the object data record for the hierarchical level;  
in which method the process data stored for the  
20 corresponding object data records are compared with  
the stored limit values for the corresponding object  
data records;  
in the comparison, the hierarchical levels of the  
object data record of the stored process data being  
25 iteratively processed according to a predeterminable  
hierarchy in such a way that, starting from a highest  
hierarchical level, the next-lower hierarchical level  
is processed, and this is repeated until the  
processing has reached the lowest hierarchical level;  
30 and  
the unspecific value of a hierarchical level of the  
object data record being used if the value of the  
hierarchical level is not stored as a specific value.

2. The method as claimed in claim 1, in which the physical object is a wafer.
3. The method as claimed in claim 1 or 2, in which the hierarchical levels correspond to logistical levels of the manufacturing process.
4. The method as claimed in one of claims 1 to 3, in which unspecific limit values are stored for process parameters by using unspecific object data.
5. The method as claimed in one of claims 1 to 4, in which the values of the at least one process parameter are measured.
6. The method as claimed in one of claims 1 to 5, in which the hierarchical levels are sorted according to a predeterminable sorting criterion.
7. A device for the computer-aided monitoring of process parameters of a manufacturing process of a physical object, object data which identify the physical object being assigned to various hierarchical levels, object data of various hierarchical levels being grouped to form hierarchical object data records, limit values for at least one process parameter being stored and respectively assigned to a hierarchical object data record, process data of the at least one process parameter, measured during the manufacture of physical objects, being stored and the hierarchical object data records corresponding to the object data being determined for physical objects manufactured; with a processor, which is set up in such a way that the following method steps can be carried out:

storing an unspecific value for the hierarchical level  
if no specific value is stored in the object data  
record for the hierarchical level;  
comparing process data stored for the corresponding  
5 object data records with the stored limit values for  
the corresponding object data records;  
iteratively processing the hierarchical levels of the  
object data record of the stored process data  
according to a predeterminable hierarchy in the  
10 comparison in such a way that, starting from a highest  
hierarchical level, the next-lower hierarchical level  
is processed, and this is repeated until the  
processing has reached the lowest hierarchical level  
and the unspecific value of a hierarchical level of  
15 the object data record being used in the processing if  
the value of the hierarchical level is not stored as a  
specific value.

8. A computer-readable storage medium, in which a program  
20 for the monitoring of a manufacturing process of a  
physical object is stored, object data which identify  
the physical object being assigned to various  
hierarchical levels, object data of various  
hierarchical levels being grouped to form hierarchical  
25 object data records, limit values for at least one  
process parameter being stored and respectively  
assigned to a hierarchical object data record, process  
data of the at least one process parameter, measured  
during the manufacture of physical objects, being  
30 stored and the hierarchical object data records  
corresponding to the object data being determined for  
physical objects manufactured,  
which program has the following method steps when it  
is run by a processor:

- storing an unspecific value for the hierarchical level  
if no specific value is stored in the object data  
record for the hierarchical level;  
comparing process data stored for the corresponding  
5 object data records with the stored limit values for  
the corresponding object data records;  
iteratively processing the hierarchical levels of the  
object data record of the stored process data  
according to a predeterminable hierarchy in the  
10 comparison in such a way that, starting from a highest  
hierarchical level, the next-lower hierarchical level  
is processed, and this is repeated until the  
processing has reached the lowest hierarchical level,  
and the unspecific value of a hierarchical level of  
15 the object data record being used in the processing if  
the value of the hierarchical level is not stored as a  
specific value.
9. A computer program element for the monitoring of a  
20 manufacturing process of a physical object, object  
data which identify the physical object being assigned  
to various hierarchical levels, object data of various  
hierarchical levels being grouped to form hierarchical  
object data records, limit values for at least one  
25 process parameter being stored and respectively  
assigned to a hierarchical object data record, process  
data of the at least one process parameter, measured  
during the manufacture of physical objects, being  
stored and the hierarchical object data records  
30 corresponding to the object data being determined for  
physical objects manufactured,  
which element has the following method steps when it  
is run by a processor:

storing an unspecific value for the hierarchical level  
if no specific value is stored in the object data  
record for the hierarchical level;  
5 comparing process data stored for the corresponding  
object data records with the stored limit values for  
the corresponding object data records;  
iteratively processing the hierarchical levels of the  
object data record of the stored process data  
according to a predeterminable hierarchy in the  
10 comparison in such a way that, starting from a highest  
hierarchical level, the next-lower hierarchical level  
is processed, and this is repeated until the  
processing has reached the lowest hierarchical level,  
and the unspecific value of a hierarchical level of  
15 the object data record being used in the processing if  
the value of the hierarchical level is not stored as a  
specific value.